Attachment I

Version 4b Guidance

SEPA Project Review Form

Guidance Document

March, 2000

TESTING DRAFT

Publication No. 00-06-???

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Purpose of the SEPA Project Review Form

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. The purpose of the form is to provide information to help applicants and the agencies identify likely environmental impacts from the applicant's proposal and to reduce or avoid these impacts, if possible. The agency will also use this information to decide whether the likely environmental impacts of the project need further study, have been adequately addressed by existing regulations, or can be mitigated.

Instructions for the Applicant

The form asks you to describe the proposed project, the project site and surrounding area, and the likely changes to the environment that would result from the project. The questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land.

You must answer each question accurately and carefully, to the best of your knowledge. Complete answers to the questions now may avoid unnecessary delays later. If you need help in answering the questions, contact the agency requiring the checklist or the county/city where the project is located.

The information you provide will help the agencies analyze your project and decide whether additional studies are needed. This information will also be used by the agencies when deciding whether to issue the necessary permits or approvals. The form is designed to help you think about the possible environmental consequences of your proposal. You are encouraged to consider ways to eliminate or reduce these impacts through changes in your proposal, restoration efforts, etc.

Instructions for the Lead Agency

As the lead agency, you are responsible for conducting the environmental impact analysis for this project. The information in the form and your environmental analysis will be used by other agencies in their decision making process and may be used as the basis for conditioning or denying a proposal.

Either the applicant or you, as the lead agency, may complete the form. If completed by the applicant, you must review the answers and ensure that they are complete and accurate. You are encouraged to note additional information or changes on the form itself. Whether the information is noted on the form or attached as supplemental information, the intent is to provide reviewers with sufficient information to understand the proposal and its potential environmental impacts.

The form and this guidance document take you through the environmental review process. The questions ask for information about the proposed project, compliance with local, state, and federal regulations, likely environmental impacts, and possible mitigation for the proposal.

Useful Definitions

Critical Areas - areas that are formally identified in an ordinance adopted by a city and county. Categories include wetlands, streams and surface water bodies, aquifer recharge areas, frequently flooded areas, geologic hazards, and fish and wildlife habitat conservation areas. It is the ordinance of the city or county where the project is located which applies regardless of whether a permit is needed from that city or county. Consult with your local jurisdiction to determine what critical areas have been designated. Maps should be available for review at their office and sometimes at their Internet site. (Chapter 36.70A RCW)

Natural Resource Lands - lands that are formally identified in an ordinance adopted by a city and county. These include forest, mineral, and agricultural lands. You should check with the jurisdiction (city or county) where your project is located to find out the criteria for identifying a natural resource land. These may be available on maps or at their Internet site.

Mitigation means

- avoiding,
- minimizing,
- repairing or restoring,
- reducing or eliminating over time,
- replacing, enhancing, or providing substitute resources; and/or
- monitoring the impact and taking appropriate corrective measures. For the purpose of the checklist it would be appropriate to generally describe what the corrective measures might be.

Information Needed for Filling Out the Checklist

I. Names and addresses:

- Owner name and address
- Applicant name and address
- Site address

II. Information from your files or the local jurisdiction

- Legal description
- Zoning of site
- The planning area it is in
- The shoreline zone it is in, if any
- Flood Zone it is in, if any
- Local School District name
- Local fire services name

(Continued on next page.)

- ❖ Environmental information/reports about the site or the project
  - Name of environmental reports which will be required (e.g. transportation study, wetlands report)
  - Name of reports being prepared or already prepared with environmental information about the project, the site, or the area

If applicable:

- ❖ Sanitary Waste information: name of public utility, if needed
- ❖ Water use information: name of public utility, if needed
- ❖ Name of other utilities needed (e.g. electricity from Puget Sound Energy, telephone from U S West)
- ❖ Name and location of any historic or cultural sites on or near the property; the historic register can help identify these
- ❖ Location of any critical areas (e.g. steep slopes/geologic hazards, wetlands, surface water, frequently flooded area, aquifer recharge) and their buffers on the site
- ❖ Requirements of critical areas ordinance for any critical areas on the site
- ❖ Name and location of any Natural Resource Lands on the site
- ❖ If existing structures on site, their required setbacks

III. Site information

You may need to visit all sites where the project will occur to collect this information.

- ❖ Acreage of the site(s)
- ❖ Existing land uses of the site(s)
- ❖ Past land uses of the site(s)
- ❖ Adjacent land uses
- ❖ Closest waters on or off the site(s) (within x miles) (e.g. streams, creeks, rivers, lakes, wetlands)
- ❖ Unstable soils
- ❖ Information for a site map (including all sites where proposal will occur):
  - Locate 'North'
  - Written directions to site
  - Dimensions of property and locations of boundaries and easements
  - Soil types and location on site
  - Existing topography of the site - draw contours
  - Location of waters on site (e.g. streams, creeks, rivers, lakes, wetlands)
  - Location and name of adjacent roads
  - Location of access onto the site
  - Location of existing structures including their dimensions on site
  - Location of existing trails, parking, roads, utilities and any other improvements on site
  - Location and dimensions of proposed improvements including structures, parking, utilities, roads, trails

IV. Project Information

- Proposal type (e.g. residential, commercial, industrial, forest practice, gravel mine) and size
- Existing square footage of impervious surface and additional square footage proposed
- Water use - quantity in gallons per day (if only for residential use, a formula for calculating water use will be provided)
- Existing water rights
- Project discharges - what it is and where it will go (e.g.??)
- Stormwater handling - how will it be handled and where it will go
- If timber removal - quantity to be removed in board feet
- Clearing/native vegetation removal
- Grading and filling - quantity in cubic yards
- Additional traffic caused by the proposal - in peak hour round trips per day
- Information for a site map (including all sites where proposal will occur):
- Location of all proposed clearing and grading
- Proposed topography - draw contours

V. Information from your local jurisdiction, the Permit Handbook, and/or On-line Permit Assistance at http://www.ecy.wa.gov/apps/opas/pac_start.html

- Permits required to construct, operate, and/or close the project

VI. Code information that may be needed

- Local - Critical Areas (for any critical areas which may be on your site)
- Local and State - Stormwater requirements (for any stormwater runoff)
- Local and State - Erosion control requirements
- Local and State Health - regulating effluent discharges

Instructions for Part A: Applicant and Lead Agency:

1.1, 1.2, & 1.3

- **Name:** It is helpful to have both the name of the company or agency and the name of the contact person when the applicant, preparer, or property owner is an agency or business.

1.4 Location

Legal Description

If the project runs in a line (e.g. utility lines, roads) and/or covers several sites, you should provide such maps or written descriptions that will provide sufficient information for the reviewer to understand the precise location of the project. This alternative information may be incorporated into the site plan and/or vicinity map that is requested later in the checklist. Remember to note where the information can be found.

Address and Assessor's Parcel Number

If multiple addresses and/or parcel numbers apply to the project, you may identify the primary address and parcel number(s) and refer to an attachment with the map or written description as described in Section 1.6 above.

WRIA #:

The Water Resource Inventory Area number identifies the watershed your project is in. A WRIA map is included on page XX of this guide. More detailed maps can be found at http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm, or you may consult your local jurisdiction or Washington State Dept. of Fish and Wildlife.

Instructions for Part B: Property and Project Information

1.5 Project Description

Although the emphasis should be made on the new proposal rather than existing conditions, you should provide sufficient information about existing conditions to accurately depict all aspects of what is proposed.

- **Name:** Many projects have names but not all. Residential developments, commercial, and industrial ventures are often named.
- **Description:** In the project description, provide a sentence, that: 1) names the type of activity (e.g. retail, land clearing, commercial timber thinning, warehouse), and 2) mentions the actions which would occur (e.g. grade, fill, clear, construct, operate, close, demolish, mine). Provide sizes and/or quantities if known.

1.6 Proposed Timing or Schedule

Include information on when any construction phase is expected to begin and end, initiation of use or operation, expected end of use, and the timing of closure or reclamation.

1.7 Phased and Future Projects

AN EXAMPLE OF A PHASED PROJECT might be a residential development that is planned to be built out over a twenty-year period. The first phase involves 40 acres of single family homes. The second phase includes a conceptual plan for apartments on adjacent land. The third phase includes a recreation center and more single family homes or apartments, depending on the market at the time. It is appropriate to identify plans for all three phases at this time. Then the agency can identify the pieces that should be analyzed now and the pieces that should be analyzed later.

These questions are trying to determine what your total proposal includes and when environmental review should occur in the planning and permitting of a project (WAC 197-11-060). It does not refer to the schedule for building or implementing the proposed project, which is part of your project description in Part A.1.4 of the checklist.

If this is a portion or later phase of a larger or previous activity, you should identify any prior approvals in Section 2.4.

A **planned action** is a specific type of proposal defined by local ordinance or resolution for which the environmental review under SEPA has been completed prior to permit applications being submitted. If you are not already aware that you have a planned action, it is unlikely the term applies to your proposal. [See RCW 43.21C.031(2) and WAC 197-11-172.]

1.8 Special Reports

- Include reports, studies, or other environmental documents that have been, are being, or will be prepared that provide relevant environmental information about your project, the site, or the area. They may be created to support your project proposal, for a similar or related project, or have been developed during local planning by the city or county, etc. Documents identified here are "incorporated by reference."
- Special reports, studies or plans would include those required by development regulations or submitted with project applications. Examples might be:
  - Wetland Report
  - Traffic Study
  - Geotechnical Study
  - Archaeological Report
  - Stormwater Pollution Prevention Plan (SWPPP)
- Normally, you do not need to list application forms and plan sheets, applicable laws and development regulations, comprehensive plans, and their associated SEPA/NEPA documents because they are automatically considered to be incorporated by reference - as long as they are readily available for review during any applicable comment period. If you are using portions of these documents to provide the analysis of specific project environmental impacts or mitigation measures, then they do need to be listed.

AN EXAMPLE OF A COMPREHENSIVE PLAN THAT SHOULD BE LISTED is one that includes a traffic study that you are relying on to identify project traffic impacts and mitigation. In this case, you should include the comprehensive plan in the list and specifically mention the study.

1.9 Permit Information

List all approvals or permits from any governmental entity that will be needed for your proposal, if known, whether from the agency requesting the checklist or from other governmental entities. Governmental entities include: cities, counties, state agencies, districts, ports, and federal agencies.

Some permits may have already been approved because they were exempt from SEPA or are for an earlier phase of the proposal. Include any required certificates or letters of availability for public services or utilities.

> If you do not know the permits that might be required, the agency requesting this checklist or the state permit assistance center (Department of Ecology, Olympia, 360-407-7564 or http://www.ecy.wa.gov/) can help you.

Commonly required permits include but are not limited to:

Local City or County Permits:

- Building
- Preliminary plat
- Grading
- Water system
- Shoreline
- Right of way
- Utility
- Site plan review
- Land use
- Septic system
- Floodplain development
- Variance (zoning, shoreline, etc.)

State Permits:

- *Dept. of Fish and Wildlife*
  - Hydraulics Project Approval
- *Dept. of Natural Resources*
  - Forest Practices
  - Aquatic lease
  - Burning (forest slash)
  - Reclamation
- *Dept. of Ecology*
  - Water rights
  - NPDES
  - Water quality certification
  - Stormwater
- *Dept. of Ecology or local air authority*
  - New Source Review (for a business or industry)
  - Notice of Intent for demolition projects

2.1 Planning, Zoning, and Other Designations

Much of the information requested in this section can be acquired from your local jurisdiction (the city or county).

- **Acreage of site:** 43,560 square feet equals 1 acre. For help converting square footage to acreage, there is a conversion table on the previous page.
- **Current Zoning:** Include allowable density.
- **Planning Area**: Identify if the site is located within a designated Urban Growth Area (UGA) as designated by the city or county.
- **Shoreline Master Plan Designation**: If the site includes a shoreline of statewide significance provide the shoreline designation. The city or county will have this information.
- **Flood zone:** Zone designations are found on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs). FEMA maps are available through the local jurisdiction or by contacting Dept. of Ecology's regional floodplain staff.
- **Closest Surface Water**: Identify the closest named water body and whether it is on site or, if off site, how far away If there are no surface waters or wetlands within 300 feet of the project site, it is only necessary to list the nearest surface water body and the distance from the site.
- **Critical Areas**: Critical Areas are formally identified in an ordinance adopted by a city and county. Categories include wetlands, streams and surface water bodies, aquifer recharge areas, frequently flooded areas, geologic hazards, and fish and wildlife habitat conservation areas. It is the ordinance of the city or county where the project is located which applies regardless of whether a permit is needed from that city or county.

- **Natural Resource Lands**: Natural Resource Lands are formally identified in an ordinance adopted by a city and county. These include forest, mineral, and agricultural lands. You should check with the jurisdiction (city or county) where your project is located to find out the criteria for identifying a natural resource land. These may be available on maps or at their Internet site.
- **Historic Register:** Identify whether places or objects on or adjacent to the project site are listed or proposed for listing on a historic register. Contact the local jurisdiction or the State Office for Archaeological and Historic Preservation for information.
- **Cultural Site:** Identify if there are any places or objects on or adjacent to the project site that are of archeological, scientific or cultural importance. Contact the local jurisdiction, the State Office for Archaeological and Historic Preservation, the TRAX system (regional DNR offices), or tribal sources for information.
- **Other applicable plans/designations:** Identify any plans or designations that may affect/regulate your proposal. They may include:
  * Local subarea plan or overlay zones
  * State designated harbor
  * Air quality non-attainment area

* Watershed management plan
* Habitat conservation plan
* Wild and Scenic River designation
* State or national park, monument, wilderness, wildlife refuge, marine sanctuary, scenic area

❖ **Historic Register:** Identify places or objects on or adjacent to the project site that are listed or proposed for listing on a historic register. Contact the local jurisdiction or the State Office for Archaeological and Historic Preservation for information.

❖ **Cultural Site:** Identify places or objects on or adjacent to the project site that are of archeological, scientific or cultural importance. Contact the local jurisdiction, the State Office for Archaeological and Historic Preservation, the TRAX system (regional DNR offices), or tribal sources for information.

2.2 Acreage

Acreage should be described in at least two significant figures, unless less than one-tenth acre.

CONVERSION TABLE			
Square Feet	**Acres**	**Square Feet**	**Acres**
44	0.001	3,485	0.080
87	0.002	3,792	0.085
131	0.003	3,920	0.090
174	0.004	4,228	0.095
218	0.005	4,356	0.10
261	0.006	6,534	0.15
305	0.007	8,712	0.20
348	0.008	10,890	0.25
392	0.009	13,068	0.30
436	0.010	15,246	0.35
653	0.015	17,424	0.40
871	0.020	19,602	0.45
1,089	0.025	21,780	0.50
1,307	0.030	23,958	0.55
1,525	0.035	26,136	0.60
1,742	0.040	28,314	0.65
1,960	0.045	30,492	0.70
2,178	0.050	32,670	0.75
2,396	0.055	34,848	0.80
2,614	0.060	37,026	0.85
2,831	0.065	39,204	0.90

3,049	0.070	42,282	0.95
3,267	0.075	43,560	1.0

2.3 Land Uses

- **Land Uses (Existing, Past, and Adjacent):** Examples: agriculture, forest, residential development, commercial, freeway, park, open space, offices, light industry, dairy farm, school, parking lot or (although rare) no use.

2.4 Service Providers

- **School District:** Information not required if the proposal does not involve residences.
- **Emergency Services:** Emergency aid vehicle services or other types of emergency services that may be needed for your project, including spill response, coast guard, etc.

2.5 Utilities Needed

- **Water Use:** Do not include existing water consumption unless the proposal includes a change of use or source. For single and multi-family residential development, the local water utility can supply information about typical consumption in your community.
- **Energy Sources:** If no new, changed, or increased use is proposed, this information is not required.
- **Discharges:** Do not include existing discharges. Average wastewater discharges per household can vary significantly by the type and integrity of the sewer collection system and seasonal variation. For residential development you may assume an average of 225 gallons per day for each household, or contact your local sewer district for the typical quantity for the area.

2.6 and 2.7 Plants and Animals

- **Threatened and Endangered Species:** A list of threatened and endangered plant and animal species within Washington State is available at http://ecos.fws.gov/webpage/webpage_usa_lists.html or by contacting the U.S. Fish and Wildlife Service.

2.8 Site Changes

Acreage should be reported in at least two significant figures, unless less than one-tenth acre. 43,560 square feet equals 1 acre. For help converting square footage to acreage, there is a conversion table on page 7.

- **Water surface area:** Do not include water surface area within wetlands already described in this section.
- **Roads, buildings and other impervious surface:** Includes building footprints, asphalt and concrete areas, covered or capped ground; any square foot where rain cannot percolate into the ground.
- **Demolition:** Includes demolition of roads, structures, walls, and other things that will produce a non-biodegradable waste.

2.9 Transportation

- **Trips per day:** Peak hour trips/day is the measure of vehicle trips to or from the project site during peak week day traffic hours (approximately 6 AM to 9 AM and 3:30 PM to 7:00 PM) within a given 24-hour weekday. The availability of public transportation, encouragement of car or van pooling, the use of flex-shifts or telecommuting, as well as other traffic mitigation measures may be used to decrease the estimates of traffic generated by the project, but should be detailed in Section 9.1.

  Residential peak hour trips per day can be estimated as approximately 4 per residence. Example: If you are proposing 12 residences, peak hour trips per day would be 12 x 4 = 48.

  Businesses with a single standard 8 to 9-hour shift, peak hour trips per day equals approximately 2 per employee. For those running additional 8-hour shifts, peak hour trips per day would be 2 per day-shift employee in addition to 1 for each swing-shift and/or night-shift employee. Additional expected traffic from shipping and deliveries should also be included in the estimate.

- **On-site parking:** Single-family residential construction projects, need not respond.

Instructions for Part C: Impacts and Mitigation Section

EXAMPLES OF POSSIBLE RELATED ASPECTS OF A PROPOSAL:

- Timber removal and/or preliminary grading for conversion to a different use
- Clearing and grading for data collection, exploration, or site preparation
- Constructing utility lines off site to provide services to the site.

Consider construction, operation, closure, etc.

All aspects of the proposal that may affect the environment need to be considered.

Project site includes all activity and mitigation locations

There may be more than one location involved for your proposal. Consider, shipping and receiving, headquarters office, warehouses, operations, locations for any construction (e.g. utility installation/extension), off site processing, off site mitigation.

Summarize

Provide a simple description of what the existing condition is and what will be happening. Ask yourself these questions: How will the project change the site? What will be done to meet codes, etc.? What will be done to avoid or otherwise mitigate impacts?

When briefly summarizing how the project will comply with local or state regulations, do not restate the code or regulation or state "Complies with code". Mentioning the specific regulatory requirements that apply may be helpful, but most importantly, answers should provide a summary, in a few sentences (50-100 words at most), of what the project will do to avoid or otherwise mitigate impacts.

EXAMPLE OF A BRIEF SUMMARY "Stormwater will be routed through oil/water separators and then biofiltration swales, before being placed in a detention pond sized per city code and discharged to city stormwater system (or name of water body)."

"N/A" or "Does not apply" is not an acceptable answer

You should assume all questions must be answered unless you are notified by the lead agency that "do not know" is acceptable. Under some circumstances, "Do not know" may be an acceptable answer from you if the lead agency is willing to complete the checklist and answer the question. (The lead agency should provide guidance regarding which questions they will automatically answer while reviewing the checklist or which questions they are willing to answer if the applicant does not know.) Otherwise, the lead agency may return the checklist to you for additional information or studies.

Reference Studies or Reports and Cross Reference

- An important purpose of the Impacts and Mitigation Section is to allow you and the lead agency to identify and reference any studies that provide relevant information about the site, the project, the impacts, and/or the mitigation so that this information can be used and not duplicated during project review.
- If the studies are not yet completed, identify when you expect them to be completed.
- Studies or reports identified in this section allow the reviewers to understand which specific topics or impacts the studies relate to.
- They should also be identified in Section 2.4 with the "Yes" box checked (because Section 2.4 may be used in the local jurisdiction's Notice of Application, the studies should be identified in both places).
- It is not necessary to repeat information already provided under a separate question. Instead refer the reader to the location of the information.

EXAMPLES OF CROSS REFERENCES "See Section 3.1 Critical Areas" "See attachment XX, page 5"

EXAMPLES OF MITIGATION:
New plantings will be monitored annually for three years to ensure that plants survive and meet a performance standard of 80% cover.

Mitigation includes:

- Measures explicitly required by agencies, applicable laws, or earlier approvals relating to the project
- Measures that implement, but are more specific than, an applicable regulation
- Measures an applicant proposes to take, regardless of whether they are required by law
- Measures that an agency requests and an applicant agrees to include in the project
- Monitoring to determine if additional mitigation, such as improvements or changes, might be needed in the future. Monitoring may be appropriate when an environmental change is predicted but the actual degree of change is uncertain or when the success of the proposed mitigation is uncertain.

You may wish to talk with agency staff, read applicable laws, and/or review any existing approvals for assistance to identify appropriate mitigation.

Clearly identify "possible" mitigation

Mitigation that is being considered or possible is appropriate to identify but must be clearly identified as "possible." Otherwise, any mitigation you have described will be treated as commitments and conditions of the project.

3.0 Natural Environment - Earth

3.1 Earth and Geology

Although this section focuses on earth and geology, the stability of soils is affected not only by type and structure but by wind, water, vegetative cover, and land use. Rock is clearly more stable than recent fill consisting of soft organic material, but the applicant should also keep in mind:

- Erosion control methods to defray the potential effects of wind, water, and ice on disturbed soils;
- Stormwater management post-construction (Will stormwater drainage from large areas of impervious surface be discharged directly to the ground at focused locations, released slowly in a diffuse manner, retained on site and discharged directly to surface water, or will it be piped off site?):
- How the presence and type of vegetative cover affects soil stability, considering root structure, transpo-evaporation*, and diffusion of wind and water energy; and
- Will proposed uses result in continued soil disturbance or prevent vegetation from establishing?

❖ **Landslides** are typically associated with steep slopes. Even if an area appears to currently be stable, 50 and 100-year storm events may radically alter the picture. Activities that increase or concentrate water flow, particularly below ground, loss or lack of deep-rooted vegetation, and/or placement of fill can further destabilize these areas. In determining potential impacts the applicant should consider questions such as: How will stormwater be managed? Will a vegetated buffer be maintained, including mature trees? Will significant grading or fill be required? Will the proposal involve on-going disturbance on or near the steep slope?

❖ **Mass wasting erosion** is where wind, water, or ice combined with unstable soils results in erosion severe enough to change the shape of the land's surface. In upland areas, key factors to consider are the appropriate management of stormwater and the use of soil stabilization methods such as maintaining a vegetation cover (preferably with deep root systems). Wetting disturbed soils or covering them with various types of material can reduce wind erosion until a vegetative cover can be established. Within the banks of waterbodies and in tidal areas erosion control is a complex problem, but can be reduced to how might water energy be defused? Smooth hard surfaces do nothing to defuse water energy, but only redirect it. Vegetation within the waterbody and along the eroding shoreline, sediment transport, and the use of rough surfaces are a few of the more effective answers.

❖ **Faulting** occurs when there is a break in the continuity of a rock formation caused by a shifting in the earth's crust where adjacent areas are displaced unevenly.

❖ **Subsidence** occurs when the soils compress over time, lowering the surface level. When subsidence occurs unevenly, structures and paved areas become unevenly supported and may lean or crack, and piping can develop fissures and gaps.

❖ **Liquefaction** occurs during earthquakes in large areas of unstable soils, such as when construction is done on fill sites. The loose adhesions in the soil are broken and it behaves similar to a slurry of sand in the bottom of a shaken glass, causing much greater damage than occurs in adjacent areas with more stable soil structure.

3.1.3

If a sediment and erosion control plan has been prepared, please reference.

* Transpo-evaporation is the process where water is taken up by the plant and eventually passes into the air.

4.0 Natural Environment - Water

4.1 Water Quality – Existing Water Quality Issues

4.1.1

The following information describes many of the causes of water quality impacts and the resulting effects on human health and other resources. If you are uncertain whether there are existing water quality issues for a nearby waterbody, contact your local jurisdiction, Washington Dept of Fish and Wildlife, or the Water Quality Program staff at your regional Dept of Ecology office.

- **Bacteria**: Fecal coliform bacteria poses a health risk to people who come into contact with contaminated water while fishing, swimming or wading and has been responsible for closing shellfish beds from commercial or recreational harvest. Failing septic systems, inadequately treated wastewater discharges, waterfowl, agricultural runoff, and poorly managed livestock are typical sources of this bacterial pollutant.
- **Temperature**: High water temperatures reduce the quantity of dissolved oxygen and impair or kill fish and other aquatic species. Lack of shading vegetation, shallow and/or slow-moving waterbodies, and discharges of heated process or cooling waters from industrial facilities are typical contributing factors.
- **Metals**: Metals contamination may occur naturally, or result from runoff or discharges from mining or other past and present industrial and agricultural operations. Metal toxicity can affect the brain function, health, life span, or reproductive capability of fish and other aquatic species, as well as humans and wildlife if the water or resident species are consumed.
- **Turbidity**: Turbidity is the measure of water clarity, although a high turbidity score means clarity is low. High turbidity often means there is large amount of algae or suspended solids. Algae in turn results from high nutrient loading from fertilizers, industrial discharges, human or animal waste, decomposing plant or animal matter, etc. Suspended solids are often a sign of uncontrolled erosion upland or within the waterbody, nutrient loaded runoff, or inadequately treated wastewater discharges.
- **Sedimentation**: Although sediment transport can be an important and natural stream, river, and marine water function, sedimentation from severe upland and shoreline erosion can impair the functions of all types of waterbodies. Impacts to vegetation, fish, and spawning beds; increased turbidity, and changes to bed and bank topography (temperature, flooding, etc) may result.
- **Excess nutrient loading**: Excess organic nutrients (septic, wastewater, fertilizers, animal waste, etc) results in rapid growth of algae and other vegetation. This can impair water functions, including recreation, as well as deplete dissolved oxygen in slow-moving waterbodies. If algae growth becomes so dense sunlight cannot penetrate to lower depths, even the algae and plants will die—adding further nutrient loading—and anaerobic bacteria becomes the only resident life form below a shallow margin at the surface.
- **Dissolved oxygen**: Dissolved oxygen is necessary for both fish and aquatic plant life, and is principally gained by contact with the atmosphere. Wave action, water falls, riffles, etc. are effective in increasing dissolved oxygen. Although vegetation produces oxygen during photosynthesis, plants depend on oxygen themselves when sunlight isn't available. This can cause a serious drop in dissolved oxygen during the

night in slow-moving waterbodies, endangering fish life. Under severe conditions, such as result from excessive nutrient loading, anaerobic conditions may occur. Conversely, hydroelectric dams, turbines, etc. may cause excessive amounts of dissolved oxygen that has also been proven to be harmful to fish.

- **Endangered aquatic species**: See checklist section 2.1.3. The presence of endangered species within a waterbody can make any potential adverse impact to water quality a more sensitive issue.

4.2 Water Quality - Wetlands and Surface Waters

4.2.1

Consider any water bodies on or within 200 feet of the project activities, including lakes, ponds, wetlands, streams, and salt water.

4.2.3

- To describe the water body, and any changes from the project, you should include the 1) name; 2) type; 3) size; 4) where it is on site or off site; 5) type of work over, in or within 200 feet; and 6) timing of work.
- For streams, rivers, or creeks identify:
  - whether it is intermittent (dries up sometime during the year) or perennial (moving water all year).
  - the typical stream width during the summer and the winter (where the water normally flows during that time of year),
  - the gradient - divide the elevation change between the upstream end of the stream on site and the downstream end of the stream on site by the length of the stream on site (percentage slope - 1 foot elevation change in 100 feet of stream length would equal 1%),
  - bank composition (trees, bushes, riprap) of the stream, and
  - any areas where the stream bank or stream bed is eroding.

4.2.4

Review of the types and causes of water quality impacts under section 4.1.1 may be helpful. Mitigation measures may include erosion control measures, minimizing or avoiding activities within waterbodies and their buffers, working in dry conditions where possible, planting and/or maintenance of native vegetation—including trees and shrubs, replacement or compensation for lost functions, etc.

4.3 Water Quality – Discharges to Wetlands, Surface Waters, and Ground Water

4.3.1
Do not consider stormwater as a wastewater discharge or any discharge directly to a utility.

4.3.3
Include stormwater if it has been combined with wastewater in a single system.

4.3.4
Review of the types and causes of water quality impacts under section 4.1.1 may be helpful. Mitigation measures may include treatment to remove contaminants, timing of discharge (seasonal, or minimizing/eliminating sudden large flows, etc), location or manner of discharge (diffusion, area of rapid mixing and/or aeration, etc.), sizing and design of system, etc.

4.4 Water Quality – Stormwater Runoff

4.4.4
Mitigation measures include treatment of stormwater to remove contaminants, or methods to reduce or eliminate sources of stormwater contamination. Dept of Ecology's Stormwater Management Manual may be of assistance in determining best management practices.

4.5 Water Quantity – Water Use, Runoff, Stormwater, and Point Discharges

4.5.1
Include increased withdrawals or diversions, as well as any change of use, but do not include any uses of water supplied by a utility.

4.5.2
- **Source**: If the name of the aquifer is not known, include the depth of the well required.
- **Quantity:** Do not include existing water consumption unless the proposal includes a change of use or source. For a single-family residence, peak water use is approximately 800 gallons per day (gpd) for each residence in Western Washington and 1,500 gpd for each residence in Eastern Washington.

4.5.4
- **Changes in Vegetation:** Trees, shrubs, vines, and grasses treat (remove nutrients), absorb, and slow stormwater runoff and stabilize soils, thereby reducing erosion to varying levels dependent on their root systems, growth rates, and rate of transpo-evaporation. Reducing the plant hierarchy—or denuding an area completely—can have a considerable effect on the quantity (and quality) of stormwater runoff.

- **Impervious surfaces:** Impervious surfaces can block stormwater from groundwater recharge (crucial for water supplies and maintaining summer stream flows) and dramatically reduce retention time of stormwater runoff (as well as impact water quality). To estimate the amount of stormwater that will fall on the new impervious surfaces, multiply the average yearly rainfall (inches) by the footprint (square feet) and divide by two to get gallons per year. Average annual rainfall for some communities is provided in the table below. Additional information may be available on the Washington Facts and city information Website at http://www.pe.net/~rksnow/wa.htm or from your local jurisdiction.

Average Annual Rainfall* (Inches)					
Aberdeen	68	Federal Way	39	Pullman	21
Auburn	38	Forks	121	Quinault	140
Bellingham	36	Gig Harbor	37	Seattle	38
Blaine	36	Hoquiam	60	Sequim	16
Cheney	17	H. Hanson Dam	88	Snoqualmie	80
Chewelah	20	Kelso	45	Snoqualmie Pass	104
Colville	17	Moses Lake	8	Spokane	17
Cosmopolis	84	Olympia	46	Stampede Pass	80
Darrington	77	Pasco	13	Tri-Cities	7
Deer Park	17	Port Angeles	25	Vancouver	40
Edmonds	37	Port Ludlow	20	Whidbey Island	35
Everett	35	Port Townsend	16	Yakima	8

4.5.5

If you are uncertain whether about existing water quantity issues on or off site, contact your local jurisdiction or Washington Dept of Fish and Wildlife.

4.5.6

Consider if the project will displace or alter floodwater, increase erosion or other hazards to people and the environment or add to existing problems. Questions to consider might include:

- Will any culvert, channel, or bridge's capacity to allow water to flow through be affected?
- Will flooding or erosion potential increase at any location on or off site because of increased flow (rate or quantity), vegetation changes, or lost stormwater/flood water retention capacity?
- Will additional water diversions or withdrawals be required from an aquifer or waterbody with water right controversy and/or endangered species?

Mitigation measures may include: minimizing footprint of impervious surfaces, avoiding construction or fill within wetlands and/or floodplains, replacement of lost wetlands, retention of natural vegetation—including trees, vegetation plantings, stormwater management and detention, water reuse or recycling, reduction of withdrawal, groundwater recharge, redesign of discharge, soft engineered bank protection, etc.

*These numbers may vary with other sources, dependant on the number of years averaged, and should be used for estimates only. We apologize that more locations at the time of printing were not available.

5.0 Plants and Animals

Other Information Sources

- Your city or county
- Local WA Dept of Fish and Wildlife office
- TRAX system through the regional DNR office
- Puget Sound Environmental Atlas for spawning habitat

5.1.1

- Include the consideration of areas used for crops or orchards, timber production, and grazing, as well as aquatic vegetation, natural forest land, deserts, meadows, etc.

5.1.3

- Habitat refers to where plants and animals live or could live, including areas used by fish, birds or other species while migrating.

5.1.4

- Specify if the habitat present includes state priority habitats or the species present includes state sensitive species.

5.1.5

- Habitat restoration may be proposed and should be described, even if it is not in response to any direct impacts from the project
- Measures to preserve or restore fish and wildlife corridors should be described under mitigation.
- Monitoring or ongoing stewardship of habitat should be described as mitigation, if proposed

6.0 Natural Environment - Air and Resources

6.1 Air Quality

6.1.1

Some types of activities that generate either indoor or outdoor air pollution emissions or the potential to produce an odor nuisance include:

- Abrasive blasting
- Asphalt preparation
- Coffee roasting
- Composting
- Concrete batching
- Dry cleaners
- Fuel dispensing or storage
- Fuel-fired equipment
- Landfill
- Manure application and storage
- Painting or surface coating
- Plating/Anodizing
- Printing
- Rock or material crushing, grinding, or transport
- Soil or groundwater remediation
- Solvent or other volatile liquid use or storage
- Sterilization processes
- Welding
- Wood processing

6.1.2

Identify any regional air quality limitations (air quality designated non-attainment area). For information of this type, contact your local Air Quality Authority or the Air Quality Program staff at the local Dept of Ecology regional office.

6.1.4

If the amount of the emission cannot be quantified (such as from agricultural practices, wastewater facilities, or municipal dumps), describe the source(s), including quantities known or assumed. For example: Liquid manure from X dairy cows will be sprayed on X acres during the months May through September, and will be collected on-site in a X-gallon capacity dairy lagoon.

6.1.5

Mitigation can include methods to contain, treat, or reduce odors and/or pollutant emissions, such as consistently covering material soon after deposit, placing covers over or aerating wastewater lagoons, use of bag houses or air scrubbers, wetting disturbed soils, “clean” fuel/power, recycling solid waste (rather than burning or landfill), etc.

6.2 Waste Management

6.2.1

You should consider all aspects of the proposal including site preparation, construction, and operation—both indoor and out door. Projects that will produce on average more than 100 cubic feet of solid waste per week for disposal should answer yes. Projects involving the demolition of structures or facilities larger than a typical single-family residence should also answer yes. Materials that are incinerated as well as those sent to landfill should be considered waste unless used as a fuel source. Materials to be recycled/reused should not be included as disposed waste, but should be listed in 6.2.4 as mitigation.

6.2.4

Mitigation includes any measure that reduces waste, including reuse and recycling, composting, and methods to minimize waste generated. Reuse/recycling of building materials, paper products, glass, etc.; composting; use of natural landscaping, etc. should all be considered. The staff for Department of Ecology's Recycling Hotline, 1-800-RECYCLE (732-9253), can assist you in identifying options in your area.

6.3 Energy and other Natural Resources

6.3.1

Determination of "substantial quantities" should take into consideration the scarcity and demand for the resource. Substantial quantities of rare substances, such as gold, uranium, peat or rare woods would be a smaller measure than the substantial consumption of less rare commodities such as gravel or natural gas—but all resources have a level that should be considered substantial. Questions to be considered include: Is the resource renewable? Does existing demand ever exceed the supply available? Will new sources for the commodity have to be developed? Will other current or future uses for the resource be restricted?

6.3.4

Mitigation may include choosing materials or energy sources that have been recycled or are renewable and plentiful, measures to reduce consumption, or other provisions that will increase the availability of the resource now and/or in the future.

7.0 Built Environment - Historic and Cultural

7.1 Archaeological, Cultural, and Historical Resources

Refer to part 2.2.1 of the checklist and the guidance document.

7.1.5

- Mitigation may include: avoidance, maintaining, or restoring the integrity of the site or landmark to the extent possible, relocating the structure or artifact, meeting tribal needs for the sanctity of the location, etc.

8.0 Built Environment - Land and Shoreline Use

8.1 Land Use, Natural Resource Lands and Shorelines Compatibility

Consider all project activities, including construction and long term operation (e.g. physical alteration of site, traffic generated, etc.) and future development that is likely to occur as a result of the proposal. How these will be effected by existing or past site uses and will affect existing or planned adjacent uses, as well as consistency with adopted plans and ordinances. Examples:

- Shorelines and local shoreline master plans
- Natural resource lands (e.g. agriculture, aquaculture, forestry, mining)
- Open space, scenic and recreation areas (e.g. parks, trails, green belts, wilderness)
- Special districts, whether in urban rural, or natural areas (e.g. areas that have been designated for special uses or purposes such as
  - -- Open space areas/green belts
  - -- Historical districts
  - -- Community plans
  - -- Airport overlay
  - -- State designated harbor area
  - -- Watershed management plan
  - -- Habitat conservation plan
  - -- Wild and scenic river designation
  - -- State or national park, monument, wilderness, wildlife refuge
- Zoning or comprehensive plan designations of adjacent areas or variance in development regulations between areas
- Changes in zoning or comprehensive plan designation for the project site made within the past 5 years.

8.2 Light, Glare, Noise, and Aesthetics

8.2.1

If the project is undergoing a design review process, the lead agency can assist you in answering this question.

8.2.3

- Mitigation may include: Maintenance or construction of berms and/or vegetated buffers; limiting operational hours; design of structures to absorb noise, minimize view obstructions, and/or maintain the character of the area; etc.

8.3 Existing Site Contamination

Contact the Dept of Ecology's Toxic Cleanup Program staff in the local regional office or headquarters for additional information or assistance in identifying potential or verified contaminated sites, and the type of contamination likely at a site.

8.3.1

- Knowledge of past uses, such as auto repair or wrecking facilities, gasoline dispensing facilities, dry cleaning, municipal dump site, radioactive waste, industrial site, log yard, agricultural uses (fertilizers and/or pesticides), etc. are indicators of possible site contamination.

8.3.2

- Identify if an environmental site assessment has been prepared for the site (e.g. Phase I or II site investigation, remedial investigation/feasibility study, etc.). If so, briefly summarize any actions being taken for additional study or for development of a cleanup plan for contamination or hazardous waste.

8.3.4

- Contact Ecology's toxic Cleanup Program and/or an environmental cleanup contractor for information on appropriate cleanup and/or containment methods.

8.4 Hazardous Materials

8.4.1

- Hazardous materials include petroleum, toxic or hazardous substances.

8.4

- Information on risks should be available from the supplier, such as Material Safety Data Sheets.

8.4.3

- List any Spill Prevention, Containment and Control Plan (SPCC) or similar environmental, health and safety plans, or a remedial investigation/feasibility study, federal record of decision or state cleanup action plan in Section 2.4 Special Reports above.

8.4.4

- Summarize any plans to contain or address environmental impacts and potential releases, or to bypass normal processes or controls, if an upset, scheduled or unscheduled shut down, accident or contingency were to occur, of if project construction or operations are temporarily or permanently suspended. Mitigation may also include operation measures to reduce or eliminate the use of hazardous substances.

8.5 Housing

- Existing housing units that will be demolished or converted to another use should be included as lost even if they will be replaced in some form within the proposal.

9.0 Built Environment - Infrastructure

9.1 Traffic and Transportation

9.1.1

- **Level of service** is the measure of traffic flow, generally at peak hours, with level A being unrestricted flow in comparison to the lowest level, level F, which is virtual gridlock.
- **Potential safety hazards** may include increased risks to or from all types of vehicles (air, land, and aquatic) and non-vehicular traffic (pedestrians, bicycles, canoes, etc.), as well as to public and private property, etc.

9.1.2

Identify any project or site specific studies or traffic management plans prepared or being used for your project's transportation analysis.

9.1.3

Consider if the project is likely to cause any of the following:

- Potential safety hazards, including conflicts with pedestrian movements
- Restrictions or limitations on non-vehicular traffic (bicycles, pedestrians, kayaks)
- Need for ridesharing, transit or transportation demand management (TDM) programs
- Conflicts with other vehicular movements

9.1.4

Identify any impact fees or proposed improvements (road widening, added signs or signalization, turn-lanes, etc.) that will be provided to meet required service standards. Summarize the elements of any transportation plan for reducing commute trips per day—particularly during peak hours.

9.2 Public Services and Facilities

9.2.4

- **Disproportionate use** of the existing capacity and/or future capacity, would include any of the following:
  - The project would be likely to use services or facilities such that an adopted system-wide or project-level service standard in applicable development regulations or local plans would not appear to be met (for example: required area reserved for recreation or open space in a residential development, or the number of students per classroom)
  - The project need appears to exceed available capacity of the service or facility or to use more capacity than has been allotted for the area or time period of development.
  - An expansion of the existing service area would be required.
  - A request for a certificate or other document confirming availability of services has been made and denied/not received.
- **Mitigation** may include donation of property (on or off-site) for public uses, providing recreational facilities, providing on-site security or other emergency services, operational or design measures to reduce emergency risks, impact fees, etc.

9.3 Utilities

9.3.4.

- **Disproportionate use** of the existing capacity and/or future capacity, would include any of the following:
  - A request for a certificate or other document confirming availability of services has been made and denied/not received.
  - An expansion of the existing service area would be required.
  - The project need appears to exceed available capacity in the system or to use more capacity than has been allotted for the area or time period of development.
  - The project would be likely to use services such that an adopted system-wide or project-level service standard in applicable development regulations or local plans would not appear to be met (for example, volume of stormwater to be discharged into current system).
- Mitigation may include recycling, reuse, and other waste reduction efforts; design and operational measures to reduce consumption needs; measures to increase service capacity; etc.

Instructions for Part D: Site Plan Checklist

A Complete Site Plan will be required to include the following information:

If you are unable to include all necessary information on a single site plan, you may submit several versions that provide different layers of information.

- The location of all existing and proposed property boundaries and easements, including dimensions
- The boundaries of all proposed clearing and grading
- The location of existing and proposed structures, improvements, on-site roadways, trails, parking areas and utilities
- The location and dimensions of proposed and required setbacks
- The location of adjacent roadways, including access and egress to the project site
- The identification and location of adjacent land uses
- The location of any water features such as streams, lakes, shorelines, springs, seeps and wetlands
- Topographic contours sufficient to accurately describe existing and proposed topography
- The identification of soil types by USGS Soil Conservation Survey
- The location of any geologic hazard areas, including steep slopes and landslide hazards
- The location of any historical, archaeological or cultural resource located on the property or affected by the project
- The location of any natural resource lands and critical areas and their required buffers or setbacks
- A north arrow, map scale, vicinity map, date, site address and directions to the site
- The location on the site where the GPS coordinate(s) was taken, if done

Water Resource Inventory Area (WRIA) Number Map